sugar. The question arises, Why do not all yeasts ferment the same sugars? If the origin of the fermenting molecules is in all cases the same, has a change of environment power to alter them, provided many generations of yeast-cells are exposed to the same conditions? In order to answer this question, Fischer and Thierfelder attempted to breed a yeast which should ferment a sugar its ancestors were incapable of attacking. Starting with a yeast which could attack only dextro-glucose, they mixed this sugar with its own weight of a left-handed sugar (l-mannose), and gradually increased the proportion of the latter during three months—a time sufficient for many generations of yeast-cells to succeed one another. When the proportion of glucose was reduced to one-half per cent. the fermentation still went on, but, on reducing it to nothing, fermentation ceased altogether.

So far, then, this attempt has been a failure. In another direction, however, the research was developed with more success. The experiments described had been complicated by the presence of an unknown factor—the life of the fermenting organisms. Analogous experiments were therefore made with lifeless ferments, or enzymes, such as invertin, and emulsion, by allowing them to attack molecules differing only in the space-relations of their atoms. It was found that their power of discrimination was no less exact than that of the living cell. The difference between a glucose- and a galactose-grouping (I. and III. p. 323), which is merely a matter of H and OH changing places, is for them a difference absolutely vital. In the one case they attack the molecule, in the other they will have nothing to do with it. The explanation is similar to that given in the case of the sugars. Invertin and emulsin much resemble proteids, and no doubt possess asymmetric molecules. Their limited action on the glucosides is therefore to be accounted for by the supposition that the approximation of the molecules necessary for chemical action is possible only for molecules of similar geometrical build. To use Fischer's simile, ferment and fermented substance must fit like lock and key. For stereochemistry this image is the more valuable now that the observations have been removed from the biological to the purely chemical field of the lifeless ferments. And indeed for physiological chemistry, also, this last step is no less important, since very many of the processes which go on in the organism are effected by lifeless ferments, and must be largely influenced by the geometry of the molecule.

Nevertheless, those who already deplore the use of materialistic aids to the scientific imagination will find, in this image of the lock and key, but another count in their indictment of stereochemistry.

Arnold Eiloart.

NOTES.

A Reuter telegram reports that the English tourist steamer *Garonne* arrived at Vadsö on August 2, and landed some of the members of the British expedition to observe the forthcoming eclipse of the sun. They proceeded at once to the south of the Varanger Fjord, where Her Majesty's cruiser *Volage* had already landed the astronomical instruments required for the observations. The steamship *Norse King* also arrived at Vadsö on Sunday with a large party of astronomers to observe the eclipse.

The prospects of astronomers who have gone to Norway to observe the forthcoming total eclipse of the sun, are decidedly good. A telegram has just reached us stating that Mr. Norman Lockyer, assisted by officers and men of H.M.S. *Volage*, has established a camp on Kio Island, and completed the arrangements for observing the eclipse. As many as forty observers will be employed at this station in recording various characteristics of eclipse phenomena. There is every probability that fine weather will prevail on the day of the eclipse at the station selected.

Canada is not only to be the meeting-ground of the British Association next year, but also of the British Medical Association. At the annual meeting of the latter Association, held in Carlisle last week, it was decided to accept the invitation to meet at Montreal next year, at the end of August or beginning of September. The British Association meets at Toronto on August 18, so that it will be possible for the medical members of it to attend both meetings if they wish to do so.

Dr. A. Baldacci has undertaken, during the present year, a botanical investigation of Northern Epirus, especially the district of Konitza.

The annual meeting of the Italian Botanical Society will be held this year at Pisa, from September 10 to 17. The proceedings will commence with an evening reception, and several botanical excursions are arranged during the week.

We regret to announce the death of Sir William Grove, at the age of eighty-five. His investigations in physical science, and especially the voltaic battery which bears his name, earned for him a wide reputation. He was elected a Fellow of the Royal Society so far back as 1840.

A meteor of great size is reported to have fallen on July 24, at the mines of Santos Reyes in the State of Chihuahua, Mexico. A loud explosion was heard, and a mass of luminous matter was seen to fall, striking the side of a mountain, and bringing down with it in its course a large amount of rock. The meteor finally buried itself in the ground to a great depth.

An important astronomical expedition left Chicago a few days ago for Flagstaff, Arizona, and ultimately for Mexico. Mr. Percival Lowell heads the expedition, and will make observations of Mars, assisted by Mr. A. E. Douglas. Dr. T. J. See, assisted by W. A. Coggeshall and D. A. Drew, will study double stars, and make a survey of the southern heavens. Mr. Alvan G. Clark accompanies the expedition, to put up the 24-inch telescope which has been taken.

Reuter's correspondent at Tromsö reports that the Conway expedition has successfully accomplished the first crossing of Spitzbergen from west to east and back. Starting from their headquarters at Advent Bay, on the south side of Ice Fjord, the party ascended the Sassendal, at the head of Sassen Bay, and, branching off into a long lateral valley, climbed to the high land, which was found to be one vast glacier reaching nearly to Agardh Bay, on the Stor Fjord, or Wybe Jans Water, on the east side of the island.

The retirement of Prof. Victor Horsley from the chair of Pathology in University College, London, has been made the occasion of presenting him with a testimonial in the form of a piece of plate and an album, as a mark of appreciation of the way in which he has advanced experimental pathology in this country. The album contains photographs of about fifty of the subscribers to the testimonial, together with a record of the work done by them, either in conjunction with Prof. Horsley or in the Brown Institution, and in the Pathological Department of University College, during the time he directed these laboratories.

As already announced in these columns, the Committee organised by the Kazan Physico-Mathematical Society to obtain funds to found a memorial of the renowned Russian geometrician, N. J. Lobatchefsky, received the total sum of 9072 roubles (£1433) in support of that object. A circular received from Prof. Vassilief informs us that the fund has been utilised in the following manner. A capital sum of six thousand roubles has been used to found a prize of 500 roubles to be awarded every three years for a geometrical work, and especially one on non-Euclidian geometry, printed in Russian, French, German, English, Italian, or Latin. The first prize will be awarded on November 3, 1897 (the centenary of Lobatchefsky's birth took place on November 3, 1893), and mathematicians competing for it must send in their works not later than November 3 (October 22). The sum remaining after the foundation of this prize has been devoted to the erection of a bust of Lobatchefsky, in front of Kazan University. The bust will be inaugurated on September 13 of this year, and it is hoped that as many foreign men of science as are able will be present to witness the ceremony.

A NOVEL anthropological discovery was made recently three miles from Waynesburg, in the south-western corner of Pennsylvania. A labourer, while ploughing, struck a number of stones, which proved to be graves of a character different from any heretofore discovered. Twenty vaults were found, each twenty-seven inches long, seventeen inches wide, and twelve inches deep, and each covered with a stone forty-two inches long, three inches thick, and twenty-eight inches wide at the head, thirty inches in the widest and twenty-four inches in the narrowest part. The stones were six inches below the surface of the ground. Each vault contained a skeleton of diminutive size, doubled up so as to occupy only eighteen inches of space, with the heads all in an unnatural position, and all facing the south. Under each skull was a turtle, placed as if for a pillow; and in many of the graves were skeletons of birds. The graves were arranged in the segment of a circle of almost four hundred feet in diameter. Many bone beads were found in the graves, but only one piece of metal, a small crescent-shaped copper ornament.

MR. R. H. SCOTT has sent us a copy of the report of Sir Walter Sendall, High Commissioner for Cyprus, on the succession of earthquake shocks, which we have already noted (p. 229) as occurring there at the end of June and the beginning of July. It appears that the first and most violent shock occurred about 11 p.m. on June 29, and up to the date of the report (July 4) the disturbances had continued without sign of abatement. Though most severe at Limasol, the shocks were felt from one end of the island to the other, and upwards from the sea-coast to the summit of Troodos. Mr. Mitchell, Commissioner at Limasol, reports that a shock of alarming intensity occurred at about 8.25 a.m. on July 3; the times of other movements of varying intensity felt on the same day are 12 (noon), 12.38 p.m., 2.52 p.m., 3.22 p.m. From the character of the individual shocks which, though at times very disquieting, did not produce the impression of intense and concentrated activity, it was concluded that the centre of the disturbance was at some distance from Cyprus.

THE last part (No. 12) of the first volume of the *Bolettino* of the Italian Seismological Society has reached us. The complete volume, of which we have from time to time noted the contents, includes twenty-seven papers, eight of these dealing with new instruments, four with studies of recent Italian earthquakes, and eight with the state of volcanic action in the south of the country. More than half the volume consists of notices of earthquakes registered in Italy in 1895. This section is communicated by the Central Meteorological and Geodynamic Office, and its value will be evident from the fact that it contains more than two thousand records of about 550 earthquakes. The majority of these are merely local shocks, perhaps too slight to be detected except with instrumental aid. In eighteen cases the epicentre lay outside Italy, and in three others the pulsations recorded were probably due to distant, but unknown, shocks.

THE Pigmy peoples are a source of perennial interest to anthropologists, as they undoubtedly represent a very ancient variety of the human race. The latest contribution to their osteology is a paper by Dr. R. Verneau, "On the Plurality of Ethnic Types among the Negrillos," in *L'Anthropologie* (vii. p. 153). The new material consists only of a cranium and a pelvis of a Babinga (Akka) woman from the left bank of the Middle Sangha River, about 3° S. The estimated capacity of the cranium is 1440 c.c.; this is very great for a Negrillo, being above the average of European females. Sir W. William Flower's female Akka had a capacity of only 1072, and his female Andamanese averaged 1128; 1200 c.c. is the upper limit of nannocephaly as adopted by Virchow and Kollmann. The skull is very dolichocephalic (73·2), very platyrhine (65·3), mesoseme (87·8), and has a considerable sub-nasal prognathism. These indices agree much more closely with Flower's male Akka (74·4, 63·4, 82·9) than with his female (77·9, 55·3, 82·9). The pelvis is very remarkable; so far as the form and dimensions of the brim are concerned, it is very European, but the height closely approaches that of the negress. Unfortunately there are no data from which the stature could be estimated, but the dimensions of the cranium and pelvis do not indicate pigmy dimensions; and with all due deference to Dr. Verneau, we prefer to await further evidence before accepting this as a typical dolichocephalic Negrillo.

WE have received volume iii., No. 6, and volume iv., No. 1, of that useful publication, *Indian Museum Notes*, which bids fair to rival the valuable American publications on economic entomology, upon which it is modelled. It is freely illustrated with both plates and woodcuts of destructive beetles, butterflies, moths, locusts, &c; but perhaps the most important paper in the parts before us is Mr. E. E. Green's preliminary "Catalogue of *Coccidæ* collected in Ceylon," of which he has made a special study. He enumerates 72 species, 44 of which are described as new, while nearly all the remainder either represent new varieties, or species not previously recorded from Ceylon. When Mr. Kirby published his "Catalogue of the described *Hemiptera Heteroptera* and *Homoptera* of Ceylon," in the *Journal* of the Linnean Society, vol. xxiv., in 1891, he was only able to enumerate seven species of *Coccidæ* as known to occur in Ceylon. Any entomologist who cares to take up the study of a little-known group of foreign insects (or even some of the less-studied families of the smaller British insects, for that matter), may reasonably expect to be able to increase our entomological knowledge by leaps and bounds.

G. BREDDIN has published an interesting article on mimicry in *Rhynchota* in the *Zeitschrift für Naturwissenschaften*, vol. lxix., parts 1 and 2 (pp. 17-46, pl. 1). Most of the cases of insect mimicry previously recorded have been observed among *Lepidoptera*, *Coleoptera*, and *Orthoptera*; for though those presented by *Rhynchota* are equally interesting, that order is at present much neglected by entomologists. Several instances, however, were recorded by Reuter in a paper published, in 1879, in *Öfversigt af Finska Vet. Soc. Förh*, vol. xxi. This paper being in Swedish, has attracted little notice, though the late Dr. Haase made some use of it in his well-known work on mimicry. Breddin, therefore, gives a compendium of the observations of Reuter and others on mimicry in *Rhynchota*, including the results of his own investigations. He defines two forms of mimicry—protective and aggressive—the first to avoid attack, and the second to mask it, of each of which he gives numerous examples, drawn mainly, though not exclusively, from the order *Rhynchota*. The aggressive mimicry of the carnivorous masked bugs (*Reduviidæ*) and their allies is specially noticeable, and attracted the attention of many of the earliest entomologists. Those interested in mimicry will find Breddin's article important; but it involves so much detail that a full abstract, short of a complete translation, is impracticable. It concludes with a short list of characteristic flower-frequenting beetles, by H. Hahn and P. Breddin-Magdeburg. On the coloured plate which illustrates this paper, the figures representing species of the curious Homopterous genus *Umbonia*, which resemble large thorns, are specially remarkable.

MR. W. E. NICHOLSON'S translation of the treatise in which Dr. Weismann described and discussed "New Experiments on the Seasonal Dimorphism of Lepidoptera," is concluded in the August number of the *Entomologist*. It may be remembered that the same journal published during last year a translation, by Dr. Dixey, of Dr. Standfuss's paper on the effects of artificial conditions on the development of butterflies (see NATURE, vol. liii. p. 540), and this translation, together with the one of which the publication is just completed, will doubtless be highly valued by British entomologists unacquainted with the German language. The concluding paragraph of Weismann's paper, in its English form, reads as follows: "We may now at any rate go so far as to say that the temperature *before* pupation has no influence on the colour and marking of the perfect insect. My experiments with *phlœas* already pointed to this, in so far as in this case the larvæ which hatched from Neapolitan eggs produced very different butterflies, although the pupæ only had been subjected to different temperatures, but the larvæ were all treated exactly alike. Merrifield has shown for *Ennomos autumnaria*, that the very different temperatures in which the larvæ may be reared are without influence on the colouring of the perfect insect. Therefore although, as we have recently learnt, the form of the wings of the imago is outlined very early in the larva, yet the decision as to which of two wing-determinants of an adaptively seasonally dimorphic species shall become active is, at the earliest, given at the beginning of the pupal period."

THE resources of bacteriology are seemingly inexhaustible, and its beneficent applications as varied as they are comprehensive, whilst investigations of theoretical interest are daily assuming a practical importance hardly dreamt of by their original discoverers. Little did Hellriegel, Wilfarth, and Beyerinck imagine that when they announced that certain leguminous crops are able by means of root-nodules to fix the free nitrogen of the atmosphere, and that this was accomplished by the aid of particular bacteria contained in such nodules—little did they anticipate that a few years later the great German firm of colour-manufacturers, Messrs. Meister, Lucius, and Brüning, at Höchst-am-Main, would undertake to deliver, as an article of commerce, cultivations of such bacteria under the name of *Nitragin*, wherewith to inoculate, and so supply the wants of, various leguminous crops. This is, however, what Dr. Nobbe, the distinguished follower in the footsteps of Hellriegel, has rendered by his brilliant researches an accomplished fact. Pure cultivations of nodule-organisms suitable to the growth of no less than seventeen different varieties of leguminous field crops may now be purchased from this enterprising firm. Each bottle bears a different coloured label according to the crop for which it is destined, whilst the German as well as the botanical name of the plant is also affixed. About half an acre of land may be inoculated for half-a-crown, which represents the price of a single culture bottle. The cultivations are prepared at the Höchst Works, under the direction of a former assistant to Dr. Nobbe, and the result of this latest development of practical bacteriology will be awaited with the greatest interest. Meanwhile the English Government, whilst contemplating extensive financial assistance to the agricultural interests in the country, might do well to consider whether more lasting benefit to the community might not be derived from the better endowment of science in our local colleges, and the encouragement of original research. It is the lack of this support, which in Germany is fostered so jealously, that handicaps the work, and places the worker at such a great disadvantage when compared with our more fortunate continental neighbours.

WE have received from the Deutsche Seewarte, Hamburg, a circular setting forth proposals on various questions to be raised by it at the Meteorological Conference in Paris, in September next (1) on the improvement and simplification of the exchange of weather telegrams over Europe. The introduction of the circuit-system of telegraphy, which already exists in the United States, would greatly accelerate the arrival of weather reports. Also the omission of certain details, such as the readings of wet-bulb thermometers, and maximum and minimum temperatures, not being of great importance in the preparation of weather forecasts, would lessen the cost of telegrams. (2) Uniformity of hours of observation. At present, differences of time of from one to two hours exist between the observations of different countries. So far as this country is concerned, the proposal is to take observations at 7h. a.m. instead of 8h. a.m. To carry out this recommendation, it would be necessary to open many provincial telegraph stations specially for the weather reports, as generally they do not open till 8h. a.m. Greenwich time; and in Ireland, where Dublin time is used, the offices would have to be opened still earlier. (3) Extension of the international system of meteorological publications, by means of monthly reports, and five yearly *résumés;* the investigation of the anomalies of pressure and temperature to appear only in the year-books. (4) Instruction in meteorology in schools and universities. (5) Comparison of the various sunshine recorders, and uniform instructions for the observation and exposure of the instruments. The instruments mostly in use are Jordan's photographic recorder, and the Campbell-Stokes frame and glass sphere in which the sun scorches a trace on prepared paper. (6) Maritime Meteorology. The Deutsche Seewarte will present two special papers to the Conference on the discussion and utilisation of observations made at sea.

THE Report of the Botanical Department of the State Agricultural College for Michigan is chiefly occupied by a list of the hardy plants, 1335 in number, grown in the Botanic Garden. It also contains a report of the present condition of the Herbarium (42,861 species of Flowering Plants), and some notes on Forestry.

A LARGE portion of *Botany Bulletin*, No. 13, of the Department of Agriculture, Brisbane, is occupied by a descriptive paper on the Chemistry and Economic Products of a number of Queensland Gums and Resins, by Dr. J. Lauterer. It also contains descriptions of a number of new Queensland flowering plants; additions to the Mosses, Hepaticæ, Lichens, and Fungi of the colony; and two additions to the Flora of New Guinea.

THE Helmholtz Memorial Lecture, delivered by Prof. G. F. Fitzgerald before the Chemical Society in January last, is printed in the July number of the Society's *Journal*, with a heliogravure portrait of the great investigator in honour of whom the lecture was given. It would be difficult to compose a better appreciation of a man's contributions to science than that contained in Prof. Fitzgerald's discourse.

IN another part of this issue (p. 329) will be found a notice of the fifth of an attractively produced series of reprints of old meteorological papers, edited by Dr. Hellmann. The sixth of these, "Neudrucke von Schriften und Karten über Meteorologie und Erdmagnetismus," is a facsimile reprint of Hadley's paper "Concerning the Cause of the General Trade-Winds," published in the Royal Society's *Transactions* in 1735. The paper occupies little more than four pages of the publication, but Dr.

Hellmann makes up for its slenderness by means of a short biography of Hadley, and several helpful and interesting notes. The reprints are published by Messrs. A. Asher and Co.

THE *Journal of Botany* reprints some very interesting extracts from Mr. T. Kirk's presidential address to the Wellington (New Zealand) Philosophical Society, on the displacement of native by introduced species of plants. Next to man, the chief agents in this destructive work in New Zealand are sheep and rabbits, but the black rat has also had his share. "Some districts are eaten almost bare by these close feeders, little being left except the tough bases of *Poa cæspitosa* and the wiry ligneous stems of *Mühlenbeckia*, and similar plants; even the woolly leaves of some species of *Celmisia* are often closely cropped, the result being that the more delicate plants are all but extirpated over large areas." Introduced plants like *Silene anglica*, *Erigeron canadensis*, *Rumex obtusifolius* and *crispus*, *Bromus sterilis*, and *Holcus lanatus*, have almost driven out the original littoral vegetation in some districts. Even more destructive are the ravages caused by the parasites, animal and vegetable, which some of these strangers bring with them. Some idea of the extent of this invasion may be gathered from the fact that the first catalogue of naturalised plants in New Zealand, published in 1855, comprised forty-four species; while at the present time Mr. Kirk is himself acquainted with 304 species, while others put the number at 382.

WE have received the first number of vol. iii. of *Poggendorff's Biographisch-Literarisches Handwörterbuch der Exacten Wissenschaften* (J. A. Barth, Leipzig), which is to contain short biographical notices of mathematicians, astronomers, physicists, chemists, mineralogists, geologists, geographers, &c., living within the period 1858–1883. The first number extends from "d'Abancourt" to "Beilstein," and the whole volume will contain about fifteen numbers, appearing at intervals of six weeks (3*s.* each). The times preceding 1858 have already been dealt with in the first and second volumes (price 28*s.*), and any gaps which have been discovered since will be filled up in the present volume. A fourth volume is to cover the years from 1883 to 1900. The whole work will be a monument of careful compilation, and will do much to unify the world of science. The plan of the work is admirably designed. Short biographical notices are followed by a detailed enumeration of the papers and books contributed to scientific literature. Among the men of this first number, Sir G. B. Airy is *facile princeps* in the volume of his writings, as the four closely-printed columns of titles testify. There are many Arabian and other philosophers who are now seldom heard of, such as Abraham ibn Esra of Toledo, Al Marokeschi of Marocco, and Al Mahani of Khorasan, which this dictionary preserves from unmerited oblivion. Taken as a whole, the dictionary appears to be highly trustworthy, and the print and paper leave nothing to be desired.

IN the current number of the *Comptes rendus* there is an account, by M. H. Moissan, of some further experiments on the preparation of the diamond. With the view of obtaining the greatest possible pressure upon the solution of carbon in iron during solidification, the cooling with mercury or other metal was arranged in such a manner that small spheres from 5 mm. to 10 mm. in diameter were produced. These spheres gave specimens both of the black and transparent varieties of diamond, which, although very small (0·01 to 0·02 mm.), were remarkably regular and perfect in shape, agreeing exactly with the forms found in nature.

THE additions to the Zoological Society's Gardens during the past week include a Rhesus Monkey (*Macacus rhesus*, ♀) from India, presented by Mr. V. Lloyd; two Amaduvade Finches (*Estrelda amandava*) from India, a Paradise Whydah Bird (*Vidua paradisea*) from West Africa, presented by Miss M. von Laer; a Raven (*Corvus corax*), British, presented by Mr. A. H. Cullingford; a Martinique Gallinule (*Ionornis martinicus*) from South America, presented by Mr. A. W. Arrowsmith; a Cape Viper (*Caucus rhombeatus*), a Puff Adder (*Vipera arietans*), a Cape Bucephalus (*Bucephalus capensis*), five Hoary Snakes (*Coronella cana*), a Ring-hals Snake (*Sepedon hæmachates*), four Crossed Snakes (*Psammophis crucifer*), six Rufescent Snakes *Leptodira rufescens*), three Rough-keeled Snakes (*Dasypeltis scabra*), four Rhomb-marked Snakes (*Psammophylax rhombeatus*), a Delaland's Lizard (*Nucras delalandii*), a Defenceless Lizard (*Agama inermis*) from South Africa, presented by Mr. J. E. Matcham; four Midwife Toads (*Alytes obstetricans*), South European, presented by Prof. Gustave Gilson; a Gentoo Penguin (*Pygosceles tæniatus*) from the Falkland Islands, deposited; eight Amherst Pheasants (*Thaumalea amherstiæ*), two Peacock Pheasants (*Polyplectron chinquis*), two Himalayan Monauls (*Lophophorus impeyanus*), bred in the Gardens.

OUR ASTRONOMICAL COLUMN.

THE PLANET SATURN.—In the *Astronomische Nachrichten*, No. 3365, Prof. Barnard comments upon the accounts of various new markings on the rings and body of this planet. In company with Profs. Burnham and Hough, he carefully examined Saturn with the 18½-inch refractor at Dearborn Observatory. The planet was in a good position for seeing, being on the meridian, and during the evening several difficult double-stars were accurately measured. In spite of this, no abnormal features could be discerned, either on the globe or on the rings. The recently reported observations of new divisions, ragged edges to the crape-ring, &c., were all invisible. In fact the planet appeared very similar to what Prof. Barnard usually saw with the 36-inch Lick, although the latter, with its larger aperture, made the identification of details less difficult.

NEW NEBULOSITY IN THE PLEIADES.—W. Stratonoff, in the *Astronomische Nachrichten*, No. 3366, describes the results of recent long-exposure photographs of the Pleiades, taken with a refractor of 13 inches aperture. Three photographs are mentioned, obtained with exposures of 9h. 54m., 17h. 36m., and 25h. The first two show most of the known nebulosity, but the third shows the existence of several new features. The chief of these is a long straight streak of nebulosity extending from $\alpha =$ 3h. 40·7m., $\delta = +24^\circ\ 4'$ to $\alpha =$ 3h. 41·9m., $\delta = +24^\circ\ 4'$, roughly about 20′ north of Alcyone. The breadth of this is from 20″ to 30″; it is almost parallel to the neighbouring line of nebulosity described by M. M. Henry, and has a very similar form.

Another slight nebulosity is visible on the plate near the star 18m., in the form of several filaments lying north and south, and varying in breadth from one to three minutes of arc.

NEW VARIABLE IN HERCULES.—Mr. T. D. Anderson, of Edinburgh, gives in the *Astronomische Nachrichten*, No. 3366, a description of his observations of a 9th magnitude star, leading to the discovery of its variability. This is the star B.D. + 27°·2772, whose position for 1855·0 is given as R.A. = 17h. 4m. 58·4s., Decl. + 27° 14′·3. The star could not be found in September 1895, using a 2¼-inch refractor, but in October of the same year it was easily seen with the same instrument. Taking two neighbouring stars of magnitude 8·8 and 9·6 for comparison, he found the variation in magnitude to be from 9·2 to below 10 in about a month. In July 1896 he again found the star to be invisible as in September 1895, although the neighbouring 9·6 magnitude star was easily seen again.

THE INSTITUTION OF MECHANICAL ENGINEERS.

THE annual summer meeting of the Institution of Mechanical Engineers was held last week in Belfast, commencing on Tuesday, July 28, and concluding on Friday, July 31. There were two sittings for the reading and discussion of papers, the following being a list of those presented:—